

7. Rejected Claims 6 and 7 under 35 USC 103(a) as being unpatentable over the Katayama reference (US Patent 5,875,167) in view of the Okuda et al reference (US Patent 5,883,709).

Further comment on items 1-5 above is not deemed to be necessary in this Response.

With respect to items 6 and 7 above, Applicant respectfully traverses the Examiner's rejections of Claims 6 and 7 and requests reconsideration for the reasons set forth below.

First, with regard to the Examiner's allegation that Claim 6 is anticipated by the Katayama reference, Applicant respectfully notes that Claim 6 is directed to a lens having a plane surface wherein the normal to the plane surface virtually conforms to the optical axis of the lens, and wherein the plane surface has a reflecting part that reflects light within a predetermined waveband and transmits light outside of the predetermined waveband. The Examiner has alleged that the claimed structure is disclosed in Figures 16A and 16B of the Katayama reference. Applicant respectfully disagrees.

A "lens" is an arrangement of dense materials that changes the curvature of a light wave front that impinges thereon. Thus, lenses normally converge or defract incoming parallel light. Of course, in the broadest sense, a "lens" also may include an element that allows an incoming light wave front to pass through it without any change in curvature. Applicant respectfully submits however, that the latter special situation does not fit within the normal definition of a lens.

In view of the foregoing, Applicant respectfully submits that the Examiner's characterization of the aperture control device disclosed by the Katayama reference as a "lens" within the meaning of that term in the present application is in error. In this regard, Applicant respectfully notes that the Katayama reference discloses a device that includes a flat glass substrate having a planar surface, and that the normal direction to the planar surface of the substrate virtually conforms to its optical axis (as long as one is willing to construe a flat transparent glass substrate that apparently does not change the curvature of a light wavefront passing through it as being a "lens").

The Examiner, however, also alleges that the flat, transparent glass substrate of the Katayama reference is provided with a reflecting part 41 that reflects light within a predetermined waveband and passes light outside of the predetermined waveband. Applicant respectfully submits that the Examiner's characterization in the latter respect is not entirely accurate (or complete) with respect to the aperture control devices shown in Figs. 16B and 17B of the Katayama reference. Specifically, Applicant respectfully calls attention to the fact that, as is shown in Figures 16B and 17B of the Katayama reference, the surface of the "lens" (i.e., the substrate plus the films deposited thereon) is not planar as required by Claim 6 of the present application. Further, Applicant respectfully submits that it is disingenuous to disregard the films deposited on the surface of the substrate in the determination of whether or not the structure disclosed by Katayama is a lens that meets all of the limitations of the Claim 6 of this application (i.e., whether or not Katayama discloses the planar surface claimed).

In the latter regard, Applicant further calls attention to the fact that Katayama characterizes the *different thickness* films disposed on the planar surface of the glass substrate shown in his Figure 16B as follows at Column 16, lines 14-25:

... The dielectric multilayer film 41 has a function that a light with 635 nm wavelength is all transmitted through and a light with 785 nm wavelength is all reflected. The SiO₂ film 42 has a function that adjusts a phase difference between a light transmitting through the dielectric multilayer film 14 (meaning 41) on the outside of the circular region and the air and the light transmitting through the SiO₂ film 42 on the inside of the circular region to be zero with respect to 635 nm wavelength.

Thus, the light with 635 nm wavelength is all transmitted through both the outside and the inside of the circular region of the aperture control device 5. On the other hand, the light with 785 nm wavelength is all transmitted through the inside of the circular region.

At Column 16, lines 46-52, Katayama describes a similar set of circumstances with respect to the aperture control device depicted in his Figure 17 B.

Applicant respectfully submits, therefore, that the device disclosed by the Katayama reference as an “aperture control device” cannot accurately be characterized as a “lens” having the characteristics claimed in the present application. Rather, as just indicated, the inner and outer portions of the device disclosed by Katayama have different thicknesses, and also respectively act like a transparent sheet and a phase retardation film with respect to one wavelength, and as total reflector and a transparent sheet with respect to the other wavelength.

Further, Applicant respectfully notes that in the Katayama reference the “aperture control device” is disposed between an objective lens and a collimating lens. Applicant respectfully submits, therefore, that it does not make any logical sense in the context of the Katayama reference (wherein light of two different wavelengths are to be separated from one another) for the aperture control element to be a “lens” as contemplated by the present invention. As Katayama indicates at Column 8, lines 62-67, light from collimator lens 4 passes through aperture control device 5 and enters objective lens 6 as collimated light. Consequently, it is apparent that the structure and function of the Katayama aperture control device are totally different from the “lens” being claimed in the present application thereby defeating the basis of the Examiner’s anticipation rejection of Claim 6.

In this regard as well, Applicant respectfully notes that a feature of Claim 6 of the present application is that the reflecting part provided on the plane surface of the lens reflects only light within a predetermined waveband (light A) and transmits light outside of the predetermined waveband (light B). Light A is light that is used for detecting the inclination of the lens, and light B is light that is used for attaining a predetermined function when it is made incident on the lens. More specifically, this predetermined function is, for example, a function of collecting light onto an optical disk when the lens is used as an optical pickup device.

Accordingly, with the claimed arrangement of the reflecting part of the lens, the light B made incident onto the lens is transmitted through the reflecting portion thereof. The resulting effect of this as discussed further below is that stray light is reduced when the lens is used as an optical pickup device. Accordingly, it is to be understood that the invention of Claim 6 was made in order to prevent light incident on the reflecting portion of the lens from becoming unnecessary (that is "stray") light.

In contrast, Okuda, et al discloses only that single-wavelength light (i.e., laser light) is radiated onto the lens. Therefore, the Okuda et al reference neither discloses nor suggests the problem caused when light outside of the waveband of the light used for detecting the inclination of the lens is made incident onto the lens. In other words, the Okuda et al reference is totally silent regarding the stray light problem addressed by the present invention.

The Katayama reference, on the other hand, as mentioned above discloses an element provided with a dielectric multilayer film. The dielectric multilayer film layer controls the diameter of the light that is made incident onto the lens (i.e., the glass substrate).

More particularly, as disclosed in the Katayama reference, the dielectric multilayer film layer 44 (see Katayama, Figs. 17A and 17B) transmits 635nm-wavelength light and reflects 785nm-wavelength light (see, Katayama at Col. 16, lines 42-45). However, the optical pickup device disclosed by Katayama uses both the 635nm-wavelength light and the 785nm-wavelength light. Therefore, with the element disclosed by Katayama, there is a possibility that the 785nm-wavelength light incident on the dielectric multilayer film may become unnecessary light (i.e., so-called "stray light") in the optical pickup device. Nevertheless, the Katayama reference neither discloses nor suggests the existence of this problem, i.e., the Katayama reference evidences no awareness of one of the problems addressed and solved by the present invention.

In other words, the occurrence of unnecessary light (i.e., so-called "stray light") is not prevented simply by providing a dielectric multilayer film as taught by Katayama in the context of the reflecting portion of the Okuda lens. This is clearly and definitely indicative of the fact that Claim 6 of the present application, which avoids light incident on the reflecting portion of the lens becoming unnecessary ("stray") light, is not taught, disclosed or suggested by a simple combination of the Katayama and Okuda references as alleged by the Examiner.

The Examiner also has assumed that light must be able to pass through the Okuda objective lens so as to focus on an optical disc in justification for the combination of references upon which he relies. However, the Examiner concedes that Okuda does not disclose how this is accomplished.

The reason for this gap in the Examiner's logic is that the Okuda reference is concerned with an apparatus and method for the orientation an objective lens such that the light from an incident collimated light beam will pass through the lens optimally. Okuda, however, is not specifically concerned with the function of the lens after it is correctly oriented.

Therefore, the basic teaching of the Okuda reference does not concern how the lens will effect an incoming collimated light beam once its optical axis is aligned with the collimated light of the incoming beam. Rather, Okuda's teaching is that when the optical axis of an objective lens is set at an angle to the incoming light, most of the incoming light will be reflected either from the reflective outer area his lens, the surface of the inner area, or as a result of multiple internal reflections within the lens prior to the light exiting back through the surface of the lens through which it originally entered it. In other words, the Okuda reference teaches that when the optical axis of the lens is not aligned with the direction of an incoming light beam, the vast majority of the incoming light beam will be reflected either directly or secondarily by the tilted objective lens while only a small amount of the incident light will pass through the inner central area of the lens, and further that this will remain the case until such time as the lens is placed in an orientation such that its optical axis is substantially parallel to the collimated incoming light beam.

As mentioned briefly above, the Okuda reference presupposes the use of single frequency laser light. Still further, Okuda discloses the use of an optical analyzer and an ND filter in conjunction with his lens for the express purpose of removing stray light from the beam directed toward the imaging element 33. Consequently, Applicants respectfully submit that the Examiner's comment to the effect that in the Okuda reference recording and reproducing light must be able to be transmitted through the objective lens to focus on the optical disc even if true (although not specifically disclosed) is not relevant to the disclosure of the Okuda reference concerning means and apparatus for aligning the optical axis of the lens with collimated incoming light.

Hence, Applicant respectfully submits that it is clear that Okuda depends upon the reflection of the vast majority of an incident collimated light beam to achieve the objectives of his invention. Therefore, Applicants respectfully submit that the Examiner's assumptions concerning the passage of light through, and the focusing of light by, the Okuda lens once the desired alignment is achieved (which assumptions the Examiner utilizes as a justification for his combination of references) in fact do not justify the combination suggested by the Examiner at all. In this regard it is to be noted yet again that Okuda's teachings and suggestions relate to the fact that in his lens even if light penetrates through outer reflecting surface of the lens in its inner portion, that light is either substantially totally internally reflected within the lens or after internal reflection is emitted back toward the imaging element 33 to be handled by the optical analyzer and ND filter.

In view of these circumstances, Applicants respectfully submit that the Examiner's rejection under 35 USC 103(a) at best can only be characterized as improper hindsight and/or "obvious-to-try" reasoning. In other words, while the Okuda reference might be said to disclose a reflective outer area on an objective lens, that isolated teaching by itself and taken out of the remainder of the context of the Okuda reference contains no teaching, disclosure or suggestion to one of ordinary skill in the art to the effect that that reflective portion could, or indeed should, transmit a preselected wavelength while reflecting all other wavelengths. In addition, the Okuda reference contains no teaching, disclosure or suggestion to one of ordinary skill in the art to the effect that such a capability would provide any benefit in the context of the Okuda reference.

In addition, Applicants respectfully directs the Examiner's attention to the fact that while Okuda teaches the inner area of his lens is at least partially reflective, the Katayama reference teaches that the inner section of his lens is non-reflective. This is due to the above-quoted feature of the Katayama invention with respect to the conversion of the phase difference of light of the wavelength passing through the outer portion impinging upon the inner portion so as to allow its passage therethrough (i.e., so as to allow the passage of all wavelengths through the central portion. Applicant respectfully submits that this fact in and of itself is contra-indicative of the presence of any suggestion for the combination of references suggested by the Examiner.

In summary, Applicants respectfully submit that Okuda is concerned with the alignment of the optical axis of an objective lens with incoming collimated light, not with the operation of a correctly aligned objective lens. Okuda accomplishes that goal by the use of reflected collimated light from a reflective outer flange of an objective lens (the reflected light from the inner portion of the lens being disbursed or filtered out so as not the adversely impact upon the determination of how the optical axis of the lens should be tilted relative to its original set position so as to align its optical axis in the desired manner).

Applicants have found no suggestion or reason in the context of Okuda that would indicate (or even tend to indicate) that the reflective flange portion of its lens should (or could) be formed of a material that reflects predetermined wavelengths, but allows the passage of other wavelengths. The goal of the Okuda reference does not require any such limited reflectivity, nor does either of the references suggest any advantage to be gained by using such limited reflectivity in the Okuda context.

Therefore, Applicant respectfully submits that the combination of references postulated by the Examiner is simply not suggested within the four corners of the cited art.

Instead, the Examiner's current rejection under 35 USC 103(a) is a clear example of the improper taking the claim as a framework and attempting to pick and chose elements from the prior art to fit the framework established by the claim (i.e., to construct a mosaic of isolated features of the prior art that together make up the claimed invention using the very claim at issue and its associated specification as a guide). Consequently, the Examiner has not satisfied the criteria required of him in the establishment of a *prima facie* case of obviousness under 35 USC 103(a) sufficiently to justify his currently outstanding rejection of Claim 7.

In the above regard, the criteria for the establishment of a *prima facie* case of unpatentability under 35 USC 103(a) are set forth in the MPEP as follows:

To establish a *prima facie* case of obviousness under Section 103, Title 35 United States Code (35 US §103), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2D 1438 (Fed. Cir. 1991). (See, Manual of Patent Examining Procedure §2142 (8th Edition), at page 2100-2121, *et seq.*)

Applicant respectfully submits that the Examiner has totally failed to fulfill these criteria in the currently outstanding Official Action.

Specifically, the Examiner has failed to show the necessary suggestion within the art for its combination and/or modification in the manner postulated by the Examiner. Simply stated, nothing in the Okuda reference suggests its combination with the Katayama reference in the manner postulated by the Examiner. Okuda, by the Examiner's own admission, does not teach how the lens taught therein is to function once it's optical axis is aligned with an incoming collimated light beam. Rather, it teaches basically that the entire lens is reflective and that that reflectivity can be utilized in the achievement of the alignment of its optical axis with an incoming collimated light beam. The Examiner's conjecture concerning how that lens will operate once the alignment disclosed by the Okuda reference is achieved is an inappropriate substitute for the required suggestion within the four corners of the cited art.

Applicants further respectfully submit that there can be no reasonable expectation of success with respect to the combination postulated by the Examiner until such time as the suggestion or teaching for the making of the present invention is found in the cited art without reference to Applicants' specification and/or claims. In this case, since the only clear teaching or suggestion of the claimed invention in the present record arises out of Applicants' disclosure, the Examiner's reconstruction of that invention from isolated elements of the prior art is simply inappropriate and should be withdrawn.

In view of the foregoing Response to the currently outstanding Official Action, Applicant respectfully submits that the currently outstanding rejection of Claims 6 and 7 in the present application is inappropriate under to currently existing criteria for the finding of a *prima facie* case of unpatentability under 35 USC 103(a) and that an appropriate analysis of Claim 6 in comparison with the Katayama reference clearly indicates that the claimed invention and the cited reference are quite different from one another.

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Therefore, Applicant respectfully submits that Claims 6 and 7, as well as Claims 10-19, 22-36 and 38-40, of this application now are in condition for allowance. A decision so holding and allowing Claims 6, 7, 10-19, 22-36 and 38-40 in response to this communication, therefore, is respectfully requested.

Finally, Applicants believe that additional fees are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. **04-1105**, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

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